



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/698,765	10/31/2003	Nikolay N. Korovin	004.0123	2806

29906 7590 02/08/2005

INGRASSIA FISHER & LORENZ, P.C.  
7150 E. CAMELBACK, STE. 325  
SCOTTSDALE, AZ 85251

EXAMINER

MACARTHUR, SYLVIA

ART UNIT	PAPER NUMBER
----------	--------------

1763

DATE MAILED: 02/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/698,765

Applicant(s)

KOROVIN, NIKOLAY N.

Examiner

Sylvia R MacArthur

Art Unit

1763

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 18-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9-15, 17 and 24 is/are rejected.
- 7) ☐ Claim(s) 4, 8, 14 and 16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Election/Restrictions*

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-17 and 24, drawn to an apparatus, classified in class 156, subclass 345.12.
  - ~~II. Claims 18-23, drawn to a method, classified in class 451, subclass 66.~~

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the apparatus as claimed can be used to practice a materially different process, a non-CMP process.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
4. During a telephone conversation with David Benson on 1/31/05 a provisional election was made without traverse to prosecute the invention of the apparatus, claim 1-17 and 24. Affirmation of this election must be made by applicant in replying to this Office action. Claims 18-23 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

***Claim Rejections - 35 USC § 102***

Art Unit: 1763

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-3, 9-13, 17, and 24 are rejected under 35 U.S.C. 102(e) as being anticipated by Laursen (US 6,572,445).

~~Laursen teaches a multizone slurry delivery for CMP:~~

The apparatus of Regarding claims 1, 10, 11, and 24: Laursen further teaches a platen 107 having a top surface, and at least one inlet configured to receive a polishing fluid; a plurality of holes formed in the top surface, a manifold system 102a-102c in fluid communication with at least one inlet and each of the holes; a controller 109 adapted to supply valve command signals; and a plurality of valves 106 each being disposed in one of the holes and coupled to the controller to receive the valve command signals and being operable, in response to selectively move between an open and closed position, see col. 7 lines 58-67.

Regarding claims 2, 3, 12, and 13: The apparatus of Laurens is inherently capable of this operation.

Regarding claims 9 and 17: The apparatus of Lauren is used in CMP.

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 1763

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 5-7 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laursen in view of Nyui et al (US 6,503,361).

The teachings of Laursen are discussed above.

Laursen fails to teach a rotary shaft and rotary encoder.

---

Nyui teaches a rotary shaft C and a rotary encoder according to col.3 lines 40-48. The motivation to combine the teachings of Laursen and Nyui et al is that the rotary shaft provides an axis by the platen rotates. Rotary shafts are art recognized auxiliary equipment in CMP apparatus as evidenced by Nyui. Similarly, Nyui et al teaches a rotary encoder 8 which detects the rotation information of rotary shaft. The motivation to provide the rotary encoder of Laursen is that it processes an enhanced level of process control.

Thus, it would have been obvious for one of ordinary skill in the art at the time of the claimed invention to provide a rotary encoder and rotary shaft in the apparatus of Laursen to enhance control of the rotation of the platen.

***Allowable Subject Matter***

9. Claims 4, 8 14, and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 1763

The prior art of record fails to teach or fairly suggest basing the command signals of the control on angular position data of the platen.

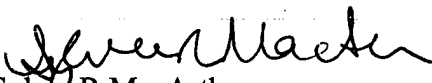
The prior art of record fails to teach or fairly suggest a controller that is adapted to receive timing data wherein the time is basis the travel amongst valves.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sylvia R MacArthur whose telephone number is 571-272-1438.

~~The examiner can normally be reached on M-F during the core hours of 8 a.m. and 2 p.m.~~

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory L. Mills can be reached on 571-272-1439. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Sylvia R MacArthur  
Patent Examiner  
Art Unit 1763

February 7, 2005